First Stage Phase Delays	First Stage Orientations	Second Stage Phase Delays	Second Stage Orientations
Γ, 2Γ, 2Γ	φ_1, φ_2, φ_3	Γ, 2Γ, 2Γ	$90°\pm\varphi_1$, $90°\pm\varphi_2$, $90°\pm\varphi_3$ (parallel component) $90°\pm\varphi_1$, $90°\pm\varphi_2$, $90°\pm\varphi_3$ (orthogonal component)
2Γ, 2Γ, Γ	φ_3, φ_2, φ_1	2Γ, 2Γ, Γ	$90°\pm\varphi_3$, $90°\pm\varphi_2$, $90°\pm\varphi_1$ (parallel component) $90°\pm\varphi_3$, $90°\pm\varphi_2$, $90°\pm\varphi_1$ (orthogonal component)
Γ, 2Γ, 2Γ	φ_1, φ_2, φ_3	2Γ, 2Γ, Γ	$90°\pm\varphi_3$, $90°\pm\varphi_2$, $90°\pm\varphi_1$ (parallel component) $\pm\varphi_3$, $\pm\varphi_2$, $\pm\varphi_1$ (orthogonal component)
2Γ, 2Γ, Γ	φ_3, φ_2, φ_1	Γ, 2Γ, 2Γ	$90°\pm\varphi_1$, $90°\pm\varphi_2$, $90°\pm\varphi_3$ (parallel component) $\pm\varphi_1$, $\pm\varphi_2$, $\pm\varphi_3$ (orthogonal component)

a1 concl'd

wherein the orientations of the birefringent elements of each stage correspond to the phase delays of the birefringent elements of the same stage in the order listed in the table; and

wherein a birefringent element of orientation $\pm\varphi_1$ or $90° \pm\varphi_1$ has phase delay Γ, wherein a birefringent element of orientation $\pm\varphi_2$ or $90° \pm\varphi_2$ has phase delay 2Γ, wherein a birefringent element of orientation $\pm\varphi_3$ or $90° \pm\varphi_3$ has phase delay 2Γ, and wherein the birefringent elements are arranged in the order listed in the table.

New claims 19 - 21 have been added, as follows:

a2

19. (new) A low dispersion interleaver assembly comprising:
a first interleaver;
a second interleaver;
wherein the first interleaver is configured so as to provide a dispersion vs. wavelength curve wherein each dispersion value thereof is approximately opposite in value to a dispersion value at the same wavelength for the second interleaver, so as to mitigate dispersion in the interleaver assembly;
wherein the first interleaver and the second interleaver each comprise a plurality of birefringent elements;

wherein the phase delays of the birefringent elements of the first interleaver are in an opposite order from input to output with respect to the phase delays of the birefringent elements of the second interleaver;

wherein the first interleaver comprises first, second and third birefringent elements have phase delays selected from the group consisting of:

Γ for the first birefringent element, 2Γ for the second birefringent element, and 2Γ for the third birefringent element; and 2Γ for the first birefringent element, 2Γ for the second birefringent element and Γ for the third birefringent element;

wherein the second interleaver comprised first, second, and third birefringent elements have phase delays selected from the group consisting of:

2Γ for the first birefringent element, 2Γ for the second birefringent element, and Γ for the third birefringent element; and Γ for the first birefringent element, 2Γ for the second birefringent element and 2Γ for the third birefringent element;

wherein the first, second, and third birefringent elements of the first interleaver have angular orientations of φ_1, φ_2, φ_3, respectively;

wherein the first, second, and third birefringent elements of the second interleaver, for a component output from the first interleaver which is parallel to an input thereto, have angular orientations selected from the group consisting of:

$90° - \varphi_3$ for the first birefringent element, $90° - \varphi_2$ for the second birefringent element, and $90° - \varphi_1$ for the third birefringent element; and

$90° + \varphi_3$ for the first birefringent element, $90° + \varphi_2$ for the second birefringent element, and $90° + \varphi_1$ for the third birefringent element;

wherein the first, second, and third birefringent elements of the second interleaver, for a component output from the first interleaver which is orthogonal to an input thereto, have angular orientations selected from the group consisting of:

φ_3 for the first birefringent element, φ_2 for the second birefringent element and φ_1 for third birefringent element; and

$-\varphi_3$ for the first birefringent element, $-\varphi_2$ for the second birefringent element, and $-\varphi_1$ for third birefringent element.

20. (new) A method for forming a low dispersion interleaver assembly comprising two interleavers, each interleaver defining a stage having two birefringent elements, configured such that light passes sequentially therethrough, each interleaver being formed by selecting first stage phase delays, first stage orientations, second stage phase delays and second stage orientations from a single row of the table:

First Stage Phase Delays	First Stage Orientations	Second Stage Phase Delays	Second Stage Orientations
Γ, 2Γ	φ_1, φ_2	Γ, 2Γ	$90°\pm\varphi_1$, $90°\pm\varphi_2$ (parallel component) $90°\pm\varphi_1$, $90°\pm\varphi_2$ (orthogonal component)
2Γ, Γ	φ_2, φ_1	2Γ, Γ	$90°\pm\varphi_2$, $90°\pm\varphi_1$ (parallel component)

			$90°\pm\varphi_2$, $90°\pm\varphi_1$ (orthogonal component)
Γ, 2Γ	φ_1, φ_2	2Γ, Γ	$90°\pm\varphi_2$, $90°\pm\varphi_1$ (parallel component) $\pm\varphi_2$, $\pm\varphi_1$ (orthogonal component)
2Γ, Γ	φ_2, φ_1	Γ, 2Γ	$90°\pm\varphi_1$, $90°\pm\varphi_2$ (parallel component) $\pm\varphi_1$, $\pm\varphi_2$ (orthogonal component)

a2 cont.d

wherein the orientations of the elements of each stage correspond to the phase delays of the elements of the same stage in the order listed in the table; and

wherein a birefringent element of orientation $\pm\varphi_1$ or $90° \pm\varphi_1$ has phase delay Γ, wherein a birefringent element of orientation $\pm\varphi_2$ or $90° \pm\varphi_2$ has phase delay 2Γ, and wherein the birefringent elements are arranged in the order listed in the table.

21. (new) A low dispersion interleaver assembly comprising:

a first interleaver;

a second interleaver;

a polarization selection element disposed intermediate the first interleaver and the second interleaver;

wherein the first interleaver is configured so as to provide a dispersion vs. wavelength curve wherein each dispersion value thereof is approximately opposite in value to a dispersion value at the same wavelength for the second interleaver, so as to mitigate dispersion in the interleaver assembly;

wherein the first interleaver and the second interleaver each comprise a plurality of birefringent elements;

wherein the phase delays of the birefringent elements of the first interleaver are in the same order from input to output as the phase delays of the birefringent elements of the second interleaver;

wherein the first interleaver comprises first, second and third birefringent elements having phase delays selected from the group consisting of:

Γ for the first birefringent element, 2Γ, for the second birefringent element, and 2Γ for the third birefringent element; and 2Γ for the first birefringent element, 2Γ for the second birefringent element and Γ for the third birefringent element;

wherein the second interleaver comprises first, second, and third birefringent elements having phase delays selected from the group consisting of:

Γ for the first birefringent element, 2Γ for the second birefringent element, and 2Γ for the third birefringent element; and 2Γ for the first birefringent element, 2Γ for the second birefringent element and Γ for the third birefringent element;

wherein the first, second, and third birefringent elements of the first interleaver have angular orientations of φ_1, φ_2, φ_3, respectively;